

Hepatitis Delta infection in individuals living with HIV – multicentric portuguese study

Valente C¹, Carvalho R¹, Lino R², Alves D¹, Aleixo R¹, Antunes C³, Ferreira M³, Pineiro C², Vasques P⁴, Casella I⁴, Azevedo C⁵, Serrão R², Miranda AC³, Mansinho K³, Teixeira T⁵

Infectious Diseases (ID) Unit, ULS Coimbra, Coimbra 2. ID Unit, ULS São João, Porto 3. ID Unit, H Egas Moniz, ULS Lisboa Ocidental, Lisboa 4. ID Unit, ULS Arrábida, Setúbal 5. ID Unit, ULS Gaia Espinho, Gaia, Portugal.

Introduction/Summary

- Hepatitis Delta virus (HDV) infection is the most severe form of viral hepatitis.
- Prevalence data among persons living with HIV (PLHIV) varies across different countries due to several reasons, namely lack of awareness and standardizing diagnostic tools.
- Features and outcomes of coinfection in PLHIV are scarce and prevalence is thought to be rising in many areas of the world due to increased risk factors.
- Increased migration from areas of high endemicity leads to increased risks of infection and disease.
- Recent data showed that the prevalence of HDV infection among PLHIV in Europe was 15.2%; from those 66% had active HDV replication (1).
- In Portugal, according to recent data, HIV/HBV prevalence is 1.73% (2).

Study Design

- To better know the prevalence of HDV among PLHIV in Portugal, data from five portuguese centers was collected, representing around a quarter of the total number of PLHIV living in this country.
- Understand the impact of migration.
- The data were obtained through clinical records.

Methods

- HIV coinfecting with a positive hepatitis B surface antigen, followed during the period from January 2023 and June 2024, were identified; demographic and clinical characteristics were analysed.
- All were tested for anti-HDV antibodies (past/current infection) and in positive cases, the authors looked for HDV RNA (active infection).
- Correlation of positive anti-HDV antibodies and risk factors were analysed.
- Degree of fibrosis, treatment for HDV and presence of other coinfections (HCV) were assessed.
- Proportion of migrants and their origin was evaluated.

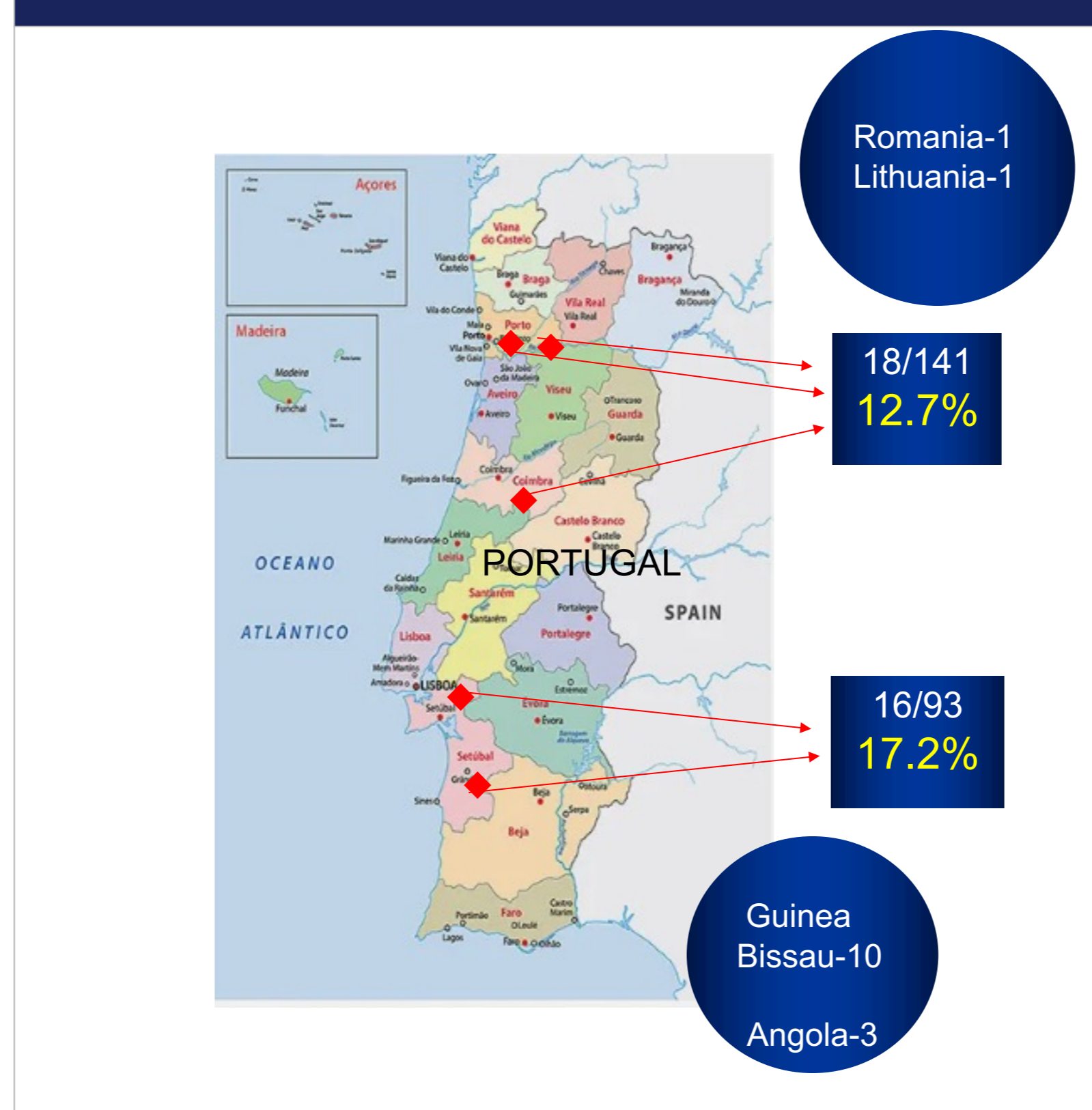
Reference

1. Béguelin C, et al. Hepatitis delta infection among persons living with HIV in Europe. *Liver International* 2023, 43:819-828
2. Carvalho R, et al. HIV/HBV coinfection in Portugal today: data from a multicentric approach. *HIV Drug Therapy Glasgow* 2024; #P 6467581

Results (1)

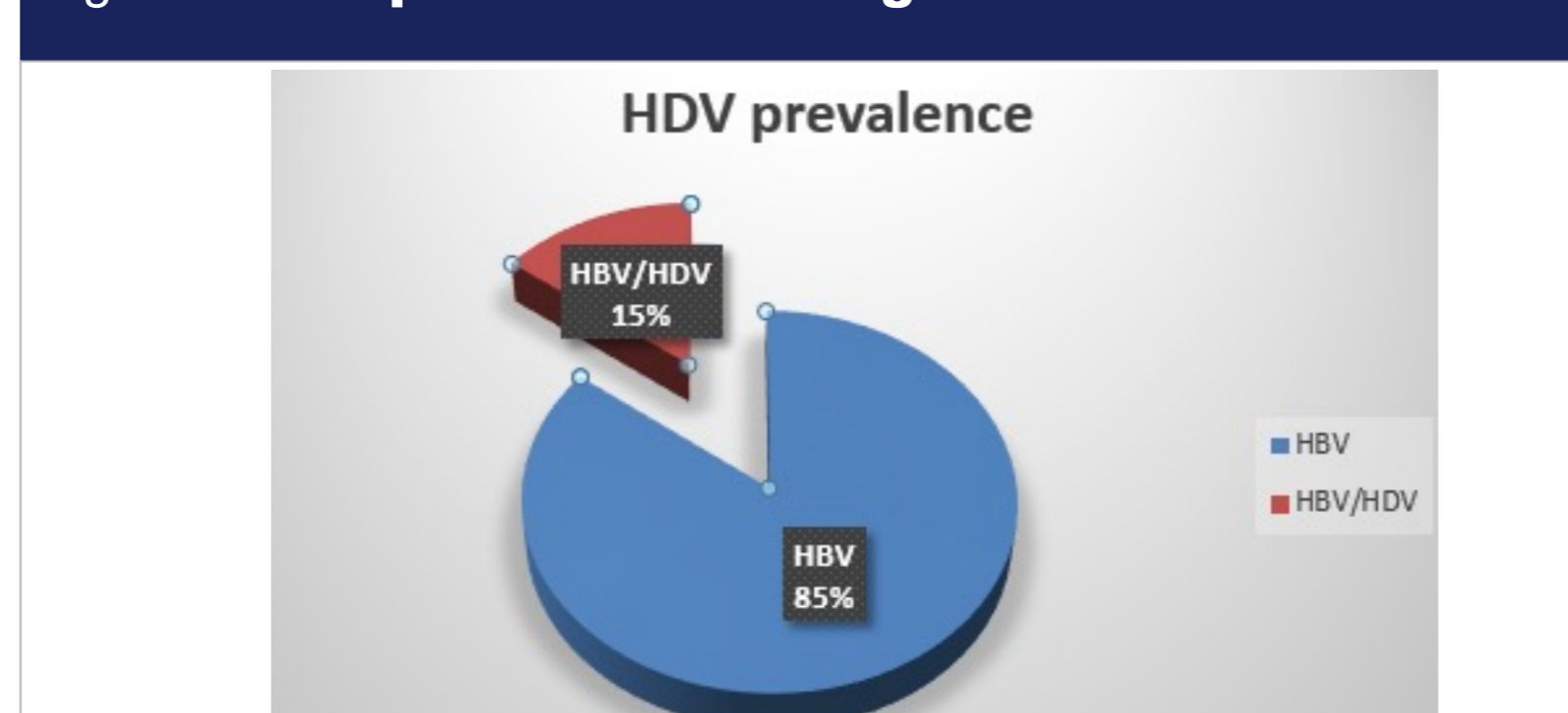
- A total of 234 out of 11711 PLHIV (2%) displayed HBsAg positive test. Of these 34/234 tested positive for anti-HDV antibodies (14.5%).
- Prevalence of HDV coinfection ranged from 12.7% in north/center (18/141) to 17.2% in south area of the country (16/93).
- From the total, 85.3% were male, and the average age was 40 yrs (ranging from 26-62 yrs), significantly different between portuguese citizens (53 yrs) and migrants (44.8 yrs).
- More than a half had portuguese nationality (55.9%) while the others had different geographical origin: Africa: Guinea Bissau-29.4% and Angola-8.8%, and others-5.9% came from Romania and Lithuania.
- Regarding HIV transmission, IVDU represented 55.9%, including portuguese citizens in 78.9% of the cases. Sexual transmission represented 41.2% and the majority came from african countries. One portuguese citizen was a MSM.

Figure 1 Geographical origin



HDV prevalence among PLHIV in Portugal - 14.5%

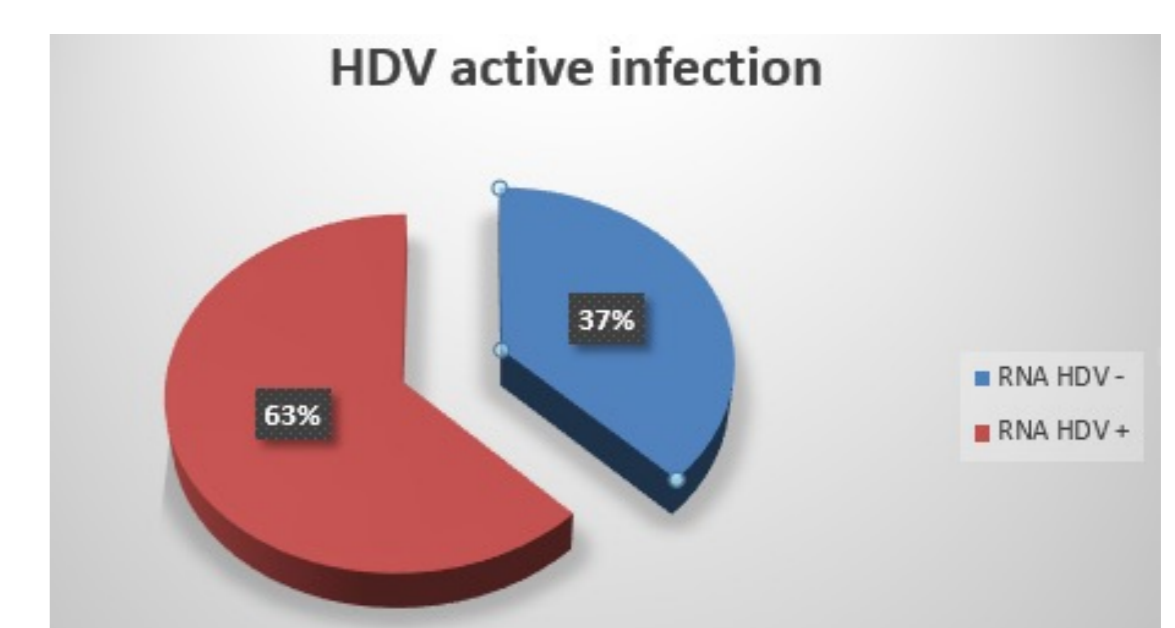
Figure 2 HDV prevalence among PLHIV



Results (2)

- HDV RNA was only available in 72.7%, with evidence of active infection in 15 (62.5%), with viraemia.

Figure 3 HDV active infection among PLHIV



- In those in whom fibrosis assessment was performed by elastography (46.7%), 50% evidenced advanced fibrosis: F3-28.6% and F4-21.4%.

Results (3)

- HBV DNA and HIV RNA were undetectable in 87.8% and 93.9% respectively, all with TDF/TAF+XTC as backbone plus INSTI inhibitor in most cases.
- Quadruple infection (HIV/HBV/HDV/HCV) was present in 67.6% of the cases, and from those 95.6% were treated or had spontaneous clearance of HCV.
- Only 46.6% (7/15) had been treated. Four of them with Pegylated Interferon and 3 are currently being treated with Bulevirtide, for 4, 8, 11 months, at the time this analysis was carried out.

Conclusion

- In this sample, prevalence of HDV infection in HIV infected individuals was 14.5%.
- HDV infection is mainly represented by IVDU and sexual transmission; in this latter case, migrant population plays an important role. They represent a key population that we must focus on.
- Advanced liver fibrosis in this triple coinfection, highlight the need of HDV screening of all HIV/HBV-coinfecting patients, close monitoring and treatment.
- More data from other centres in Portugal should be provided to enrich this sample.
- Testing all people newly identified with hepatitis B virus for hepatitis Delta virus infection should be performed.